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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,203

12/04/2003

Ramon Vega

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05/07/2004

HEWLETT-PACKARD COMPANY

Intellectual Property Administration

P.O. Box 272400

Fort Collins, CO 80527-2400

EXAMINER

NGUYEN, LAM S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,203	VEGA ET AL.	
	Examiner	Art Unit	
	LAM S NGUYEN	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/04/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4, 12, 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6682164.

Claims 6-7, 15-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 of U.S. Patent No. 6682164.

Claims 8, 11, 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 6 of U.S. Patent No. 6682164.

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Claim 9 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4 of U.S. Patent No. 6682164.

Claim 10 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3 of U.S. Patent No. 6682164.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 6-9, 11-13, 15-20, 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukuda (US 5900889).

Tsukuda et al. discloses a method for adapting a service operation of a service station, said method comprising:

Referring to claims 1, 11:

determining at least one normal service parameter (FIG. 4, steps S-15: X times of recovery; In the normal service, $X = 1$);

assigning at least one event (FIG. 4, step S-11 and column 7, lines 15-20: the pumping recovery operation sucks ink from discharge openings) related to said at least one normal service parameter;

tracking a number of occurrences of said at least one event by a counter (FIG. 4, step S-12: Track “number N of recovery times” and FIG. 1B, element 41); and

modifying a level of servicing performed during said service operation in response to said tracked number of occurrences of said at least one event by deviating from said at least one normal service parameter (FIG. 4, S-15 and S-21: The number of X times of recovery depends on the number N or recovery times in step S-12 and is deviated; For example, if $N > 7$, $X = 1$, otherwise X is selected from Table 2A).

Referring to claims 2-3, 12-13, 19-20: performing a first or second set of servicing operations in response to said track number of occurrences of said at least one event being less than or equal to a first or second predetermined value, wherein said second predetermined value is greater than said first predetermined value (Table 2A).

Referring to claims 6-7, 15-16, 23: wherein said modifying step comprises applying a level of modification to said operation in response to a predetermined modification level wherein said applying step comprises employing a table having a plurality of predetermined service operations depending upon said tracked number of occurrences of said at least event (Table 2A shows multiple levels of recovery operation (X) depending on the number of times of recovery operations).

Referring to claims 8, 17, 18, 24: wherein said applying step comprises employing an age factor to the normal service operation based upon the tracked number of occurrences of said at least one event, wherein said age factor varies according to the tracked number of occurrences of said at least one event (FIG. 4, step S-13, S-19: "READ TIME t").

Referring to claims 9: wherein said at least one event tracking step comprises tracking a number of printhead spits into said service station (column 7, lines 15-22: "Preliminary ejection is also performed into this cap 11").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukuda (US 5900889) in view of Imai et al. (US 6312087).

Tsukuda disclose the claimed invention as discussed above except performing a greater degree of service operation in response to said tracked number of occurrences of said at least one event being less than or equal to said second predetermined value than said tracked number of occurrences of said at least one event being less than or equal to said first predetermined value.

Imai et al. disclose an ink jet recorder having a controller to control a service operation wherein the controller performs a first servicing operation with a greater degree than the one of a second servicing operation in accordance to the number of times of the servicing operations (FIG. 7, steps S3-S8).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the recovery process as disclosed by Tsukuda et al. such that including the performance of a first servicing operation with a greater degree than the one of a second servicing operation in accordance to the number of times of the servicing operations as disclosed by Imai et al. into. The motivation of doing so is "to provide an ink jet recording apparatus which is capable of a purging operation which makes it possible to allow ink to be introduced into the recording head while suppressing the bubbling of the ink even in a case

where air is present in ink passages of the recording head” as taught by Imai et al. (column 2, line 35-41).

3. Claims 10 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukuda (US 5900889) in view of Imai et al. (US 6312087), as applied to claim 21, and further in view of Inui et al. (US 6719400).

Tsukuda, as modified, disclose the claimed invention as discussed above except printing a diagnostic plot by attempting to print onto a medium with each nozzle of a printhead, performing a servicing operation on said printhead in response to at least one of said nozzles misfiring, printing another diagnostic plot by attempting to print onto said medium with each nozzle of said printhead, modifying said servicing operation in response to at least one of said nozzles misfiring, and performing said modified servicing operation on said printhead.

Inui et al. disclose a recovery processing method in an ink jet printing apparatus having the steps of printing a diagnostic plot by attempting to print onto a medium with each nozzle of a printhead (column 12, lines 57-67), performing a servicing operation on the printhead in response to at least one of nozzles misfiring (FIG. 15, step S24 or S25), printing another diagnostic plot by attempting to print onto said medium with each nozzle of said printhead (column 12, lines 57-67), modifying the servicing operation in response to at least one of the nozzles misfiring, and performing the modified servicing operation on the printhead (FIG. 15, step S24 or S25 and Abstract).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the recovery operation in the printing apparatus disclosed by Tsukuda, as modified, such that including the steps of printing diagnostic plots by attempting to

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print onto said medium with each nozzle of said printhead, modifying and performing the servicing operation in response to at least one of said nozzles misfiring as taught by Inui et al.

The motivation of doing so is to “provide a recovery processing method and unit of an inkjet printing apparatus which can detect the channel miss state of the nozzles of the ink jet print head and which can recover, if any nozzle is in the channel miss state, a normal state of this nozzle while minimizing the amount of useless ink” as taught by Inui et al. (column 2, line 5-10).

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukuda (US 5900889) in view of Hirabayashi et al. (US 5172140).

Tsukuda discloses the claimed invention as discussed above except the step of replacing said service station in response to said tracked number of occurrences of said at least one event being greater than a third predetermined value.

Hirabayashi et al. disclose an ink jet recording apparatus having a controller to control the operation of a service station and to output a changing signal, that informs a user that the waste ink receiving device needs to be changed, in response to tracked number of occurrences of at least one event being greater than a third predetermined value (Abstract).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to include the step of replacing a service station in response to tracked number of occurrences of at least one event being greater than a third predetermined value as suggested by Hirabayashi et al. into the recovery station as disclosed by Tsukuda. The motivation of doing so is to “indicate the proper time to change the reservoir in order to eliminating any contamination of the recorded images and apparatus by waste ink” as taught by Hirabayashi et al. (column 2, line 42-49).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN
April 27, 2004


HAI PHAM
PRIMARY EXAMINER